# CONTENTS OF VOLUME 435

*April* 1991

LIDIERTH Malcolm Sensory integration in the spino-olivocerebellar pathways of the anaesthetized cat. 1

WANG Q. & LARGE W.A. Noradrenaline-evoked cation conductance recorded with the nystatin whole-cell method in rabbit portal vein cells. 21

LAWSON S.N. & WADDELL P.J. Soma neurofilament immunoreactivity is related to cell size and fibre conduction velocity in rat primary sensory neurons. 41

GRUBER R., VEREECKE J. & CARMELIET E. Dual effect of the local anaesthetic penticainide on the $Na^+$ current of guinea-pig ventricular myocytes. 65

MATSUDA Hiroko Effects of external and internal $K^+$ ions on magnesium block of inwardly rectifying $K^+$ channels in guinea-pig heart cells. 83

SLESINGER Paul A. & LANSMAN Jeffry B. Inactivation of calcium currents in granule cells cultured from mouse cerebellum. 101

MURRAY Richard K. & KOTLIKOFF Michael I. Receptor-activated calcium influx in human airway smooth muscle cells. 123

REBER Bernhard F.X. & REUTER Harald Dependence of cystolic calcium in differentiating rat pheochromocytoma cells on calcium channels and intracellular stores. 145

WENNMALM Åke, BENTHIN Günther, KARWATOWSKA-PROKOPCZUK Ewa, LUNDBERG Jan & PETERSSON Ann-Sofi Release of endothelial mediators and sympathetic transmitters at different coronary flow rates in rabbit hearts. 163

GERSTBERGER Rüdiger Partial uncoupling of salt gland blood flow and secretion in the Pekin duck (*Anas platyrhynchos*). 175

GANITKEVICH V. Ya. & ISENBERG G. Depolarization-mediated intracellular calcium transients in isolated smooth muscle cells of guinea-pig urinary bladder. 187

KUBIN L., KIMURA H. & DAVIES R.O. The medullary projections of afferent bronchopulmonary C fibres in the cat as shown by antidromic mapping. 207

HANDWERKER H.O., KILO S. & REEH P.W. Unresponsive afferent nerve fibres in the sural nerve of the rat. 229

KANG Youngnam, ENDO Katsuaki & ARAKI Tatsunosuke Differential connections by intracortical axon collaterals among pyramidal tract cells in the cat motor cortex. 243

MIURA Mitsuhiko & OKADA Junichi Non-thermal vasodilatation by radio frequency burst-type electromagnetic field radiation in the frog. 257

KELLER Bernhard U., KONNERTH Arthur & YAARI Yoel Patch clamp analysis of excitatory synaptic currents in granule cells of rat hippocampus. 275

ALI Liaquat & HELLMAN Bo Glucose stimulation of ouabain-resistant efflux of $Na^+$ from rat pancreatic islets. 295

TWYMAN Roy E. & MACDONALD Robert L. Kinetic properties of the glycine receptor main- and sub-conductance states of mouse spinal cord neurones in culture. 303

DUCHATELLE-GOURDON Isabelle, LAGRUTTA Armando A. & HARTZELL H. Criss Effects of $Mg^{2+}$ on basal and $\beta$-adrenergic-stimulated delayed rectifier potassium current in frog atrial myocytes. 333

WENDT-GALLITELLI Maria Fiora & ISENBERG Gerrit Total and free myoplasmic calcium during a contraction cycle: X-ray microanalysis in guinea-pig ventricular myocytes. 349

SCHOLZ Kenneth P. & MILLER Richard J. Analysis of adenosine actions on $Ca^{2+}$ currents and synaptic transmission in cultured rat hippocampal pyramidal neurones. 373

DUKES Iain D. & MORAD Martin The transient $K^+$ current in rat ventricular myocytes: evaluation of its $Ca^{2+}$ and $Na^+$ dependence. 395

MINOTA S., KUMAMOTO E., KITAKOGA O. & KUBA K. Long-term potentiation induced by a sustained rise in the intraterminal $Ca^{2+}$ in bull-frog sympathetic ganglia. 421

JOSEPH Daniel P. & MILLER Sheldon S. Apical and basal membrane ion transport mechanisms in bovine retinal pigment epithelium. 439

NISTRI Andrea & CHERUBINI Enrico Depression of a sustained calcium current by kainate in rat hippocampal neurones *in vitro*. 465

LENNARD Roger & SINGH Jaipaul Secretagogue-evoked changes in intracellular free magnesium concentrations in rat pancreatic acinar cells. 483

RUSSELL I.J. & KÖSSL M. The voltage responses of hair cells in the basal turn of the guinea-pig cochlea. 493

DRYER Stuart E. $Na^+$-activated $K^+$ channels and voltage-evoked ionic currents in brain stem and parasympathetic neurones of the chick. 513

ASHTON N., ARGENT B.E. & GREEN R. Characteristics of fluid secretion from isolated rat pancreatic ducts stimulated with secretin and bombesin. 533

GARLAND S. Jayne Role of small diameter afferents in reflex inhibition during human muscle fatigue. 547

NAKAYAMA S. & TOMITA T. Regulation of intracellular free magnesium concentration in the taenia of guinea-pig caecum. 559

WILIAMS Carole A. Effect of muscle mass on the pressor response in man during isometric contractions. 573

TOKIMASA T., TSURUSAKI M. & AKASU T. Slowly inactivating potassium current in cultured bull-frog primary afferent and sympathetic neurones. 585

SIPIDO Karin R. & WIER W. Gil Flux of $Ca^{2+}$ across the sarcoplasmic reticulum of guinea-pig cardiac cells during excitation–contraction coupling. 605

SCHWARZACHER S.W., WILHELM Z., ANDERS K. & RICHTER D.W. The medullary respiratory network in the rat. 631

MARSHALL Cameron G., OGDEN David C. & COLQUHOUN David Erratum: *Journal of Physiology* **428** (1991) 645

## PROCEEDINGS OF THE PHYSIOLOGICAL SOCIETY

**18–19 *December* 1990**

***Birmingham Meeting***

### DEMONSTRATIONS

*Di Vadi P.P., Hamann W., King D. & Wedley J.R.* Assessment of lumbar sympathetic block by measurement of femoral blood flow with the ultrasound Doppler probe and skin temperature in man. 2*P*

*Brown J.S., Thompson C.R., Docker M.F., Gee H. & Taylor E.W.* Identification of respiratory sinus arrhythmia in the human fetus and neonate. 3*P*

*Crocker J., Tarlow M.J., Comis S.D. & Osborne M.P.* A technique for the immunocytochemical localization of tumour necrosis factor in guinea-pig brain after endotoxin challenge. 4*P*

*Alford Simon & Collingridge Graham L.* Simultaneous whole-cell patch-clamp recording and imaging of single pyramidal neurones in rat hippocampal slices. 5*P*

*Frenguelli B.G. & Collingridge G.L.* A method for assessing the contribution made by electrogenic uptake to the responses of exogenously applied L-glutamate in rat hippocampal slices. 6*P*

*Davies D.A. & Osborne M.P.* A simple method for the determination of the elemental composition of biological fluids using quantitative X-ray microanalysis. 7*P*

*Rack P.M.H.* A device for investigating responses to imposed wrist movements in patients with Parkinson's disease. 8*P*

*Cook C.S. & McDonagh M.J.N.* An apparatus for stretch and release experiments on human muscle. 9*P*

*Davis G., Johns E.J. & Ross H.F.* Data acquisition using the Apple Macintosh and LabVIEW software for recording physiological responses in the rat during renal functional studies. 10*P*

*Huang C., Davis G. & Johns E.J.* Application of laser-Doppler flowmetry to the measurement of cortical and papillary perfusion in the kidney of anaesthetized rat. 11*P*

*Lewis D.I. & Coote J.H.* The electrophysiological properties of neurones in the nucleus paragigantocellularis lateralis *in vitro* in the rat. 12*P*

*Pyner Susan & Coote J.H.* Further evidence for a link between target organ and the location of sympathetic preganglionic neurones in the spinal grey matter. 13*P*

*Coote J.H., Stone Barbara & Tsang G.* Ventilation and quality of sleep in high altitude populations. 13*P*

*Birmingham Medical Research Expeditionary Society* Studies at high altitude. 13*P*

### COMMUNICATIONS

*Cooper R.G., McLaughlin B., Choo J.J., Taylor C.M. & Weiss J.B.* Elevated endothelial cell stimulating angiogenesis factor (ESAF) levels in rat skeletal muscles with potential for capillary growth. 14*P*

*Hudlická O., Egginton S., Brown M.D. & Dawson J.M.* Blood flow, performance and capillary ultrastructure in ischaemic rat fast muscles: effect of chronic electrical stimulation. 15*P*

*Egginton S. & Hudlická O.* Stimulation of skeletal muscle can induce systemic changes in capillary fine structure in the rat. 16*P*

*Brown M.D. & Wright A.J.A.* The relation of anatomical capillary supply to coronary blood flow and cardiac performance in anaesthetized rabbits. 17*P*

*Cameron N.E., Cotter M.A. & Low P.A.* Sciatic nerve blood flow and conduction velocity in anaesthetized diabetic rats and their modification by chemical sympathectomy with guanethidine. 18*P*

*Cameron N.E., Cotter M.A. & Robertson S.* Peripheral nerve function and endoneurial capillary density in streptozotocin-diabetic rats: effects of angiotensin-converting enzyme inhibition. 19*P*

*Allen Judith A., Doherty C.C. & McGrann S.* Vibration-induced vasospasm in man. 20*P*

*Forsling Mary, Poston Lucilla & Graves J.* Interaction of vasopressin and atrial natriuretic peptide in human resistance arteries *in vitro*. 21*P*

*Pile Alison J., Clough Geraldine & Dashwood M.R.* Constrictor effects of endothelin (ET-1) on the rat microvasculature in the implanted sponge and localization of [$^{125}$I]endothelin binding sites. 22*P*

*Langdown A.J. & Marshall Janice M.* Responses evoked in mesenteric microcirculation of the anaesthetized rat by systemic hypoxia. 23*P*

*Marshall Janice M. & Mian Rubina* Effects of acute systemic hypoxia on vascular permeability and leucocyte adherence in the anaesthetized rat. 24*P*

*Lever M.J. & Jay M.T.* The endothelial permeability to albumin of various large blood vessels in the anaesthetized rabbit. 25*P*

*Adamson R.H. & Michel C.C.* The ultrastructure of pathways through the intercellular clefts of frog mesenteric capillaries. 26*P*

*Walker B.R., Burt D., Brett L., Yau J.L.W., Seckl J.R., Williams B.C. & Edwards C.R.W.* 11$\beta$-Hydroxysteroid dehydrogenase in rat vasculature: *in vitro* localization. 27*P*

*Matthews J., Poston Lucilla, Graves J. & Woolfson R.G.* Sodium and buffer dependence of tension recovery from intracellular acidosis in isolated rat mesenteric resistance arteries. 28*P*

*Bonnet P. & Harder D.* Effect of hypoxia on potassium current in isolated basilar arterial smooth muscle cells. 29*P*

*Blann A.D., McCollum C.N., Waite M. & Balment R.* Raised levels of von Willebrand factor antigen (vWFAg) may indicate injury to the endothelium in hypertension in man and rat. 30*P*

*Iversen P.O., Benestad H.B. & Nicolaysen G.* Splenic blood flow during initial stage of anaemia or polycythaemia in the rat. 31*P*

*Melsom M.N., Iversen P.O., Aulie A., Sjaastad Ø.V., Standa M., Flatebø T. & Nicolaysen G.* Regional distribution of pulmonary blood flow in goats. 32*P*

*Julu P.O.O., Adler J. & Hondo R.G.* Vagal tone in healthy volunteers given atropine and in diabetic patients. 33*P*

*Thomas T., Elnazir B.K. & Kumar P.* The ventilatory response to alternations of $FiO_2$ in conscious, newborn rats. 34*P*

*McLoughlin P., Popham P., Linton R.A.F. & Band D.M.* 'Isocapnic buffering' in acidosis and alkalosis in humans. 35*P*

*Pickering A.E., Spanswick D. & Logan S.D.* Whole-cell recording from lateral horn cells in the neonate rat spinal cord *in vitro*. 36*P*

*Spanswick D. & Logan S.D.* Dual-component excitatory postsynaptic potential in lateral horn cells in rat spinal cord *in vitro*. 37*P*

*Syed N.I. & Winlow W.* Evidence for electrical and chemical transmission to follower cells of a bilateral pair of interneurones recorded from the isolated brain of *Lymnaea*. 38*P*

*Mason R. & Rusak B.* NMDA-evoked responses in the Syrian hamster suprachiasmatic nucleus *in vitro*. 39*P*

*Sutcliffe Alistair P. & Davies Stephen N.* Sustained increase in NMDA receptor-mediated component of synaptic response following induction of long-term potentiation in the rat hippocampal slice. 40*P*

*Randall A.D. & Collingridge G.L.* Kinetic properties of NMDA and AMPA receptor-mediated EPSCs recorded from rat hippocampal slices under whole-cell voltage clamp. 41*P*

*Irving A.J. & Schofield J.G.* The development of intracellular calcium responses to AMPA, NMDA and potassium ions in rat cerebellar granule cells maintained in culture at different potassium concentrations. 42*P*

*Harrison Peter S. & Kilpatrick Ian C.* Studies on the transport of quisqualate into rat hippocampal slices maintained *in vitro*. 43*P*

*Alford Simon & Collingridge Graham L.* Somatic $Ca^{2+}$ entry following repetitive synaptic stimulus in patch-clamped CA1 pyramidal neurones in rat hippocampal slices. 44*P*

*Lewis D.I. & Coote J.H.* Intracellular studies on the action of amines and amino acids on neurones in the nucleus ambiguus of the rat *in vitro*. 45*P*

*Pinnock R.D. & Woodruff G.N.* Bombesin, neuromedin B and gastrin-releasing peptide excite a subpopulation of 5-hydroxytryptamine neurones in the rat dorsal raphe nucleus *in vitro*. 46*P*

*Penington N.J., Kelly J.S. & Fox A.P.* 5-Hydroxytryptamine activates $K^+$ channels in acutely isolated rat dorsal raphe neurones. 47*P*

*Wilson G., Baldwin S., Norman R. & Wray D.* Effect of peptide-specific antibody on calcium channel function in neuroblastoma cells. 48*P*

*Lledo P.-M., Homburger V., Israel J.M., Audigier Y., Bockaert J. & Vincent J.-D.* Role of the GTP-binding protein $G_o$ in the inhibition of two voltage-activated calcium currents in lactotrophs isolated from rat pituitary. 49P

*Shorte S.L., Chappell J.B. & Schofield J.G.* 2,5-Di-(*tert*-butyl)-1,4-benzohydroquinone prevents refilling of $Ca^{2+}$ stores depleted by thyrotrophin-releasing hormone in bovine anterior pituitary cells. 50P

*Thornton S., Gillespie J.I., Dunlop W. & Greenwell J.R.* The importance of extracellular calcium ($Ca_o^{2+}$) for the oxytocin-induced rise in intracellular calcium ($Ca_i^{2+}$) in cultured single human myometrial cells. 51P

*Priori A., Bertolasi L., Rothwell J.C., Day B.L. & Marsden C.D.* Human saccadic reaction time is delayed by transcranial magnetic stimulation. 52P

*Bennett K.M.B. & Lemon R.N.* The activity of monkey cortico-motoneuronal (CM) cells is related to their pattern of post-spike facilitation of intrinsic hand muscles. 53P

*Amassian V.E., Cracco R.Q. & Maccabee P.J.* Does magnetic stimulation of human cerebellum elicit cerebral cortical responses? 54P

*Lakie M., Wiseman Rebecca M., Arblaster L.A. & Villagra F.* The lack of a relationship between physiological tremor and voluntary wrist movements in man. 55P

*Doemges F. & Rack P.M.H.* Stretch reflexes diminish as normal human subjects learn to control the force of a precision grip. 56P

*Thilmann A.F. & Fellows S.J.* Bilateral stretch reflex abnormalities at the ankle in spastic humans. 57P

*Durbaba R., Rodgers J.F. & Taylor A.* Time course of the effects of succinylcholine on spindles of the jaw muscles of the anaesthetized cat. 58P

*Grassi C., Deriu F. & Passatore M.* Effects of sympathetic nervous system activation on the tonic vibration reflex in jaw-closing muscles of the anaesthetized rabbit. 59P

*Grimwood Paul & Appenteng Kwabena* Effect of MK801 on excitatory monosynaptic transmission onto V motoneurones in the anaesthetized rat. 60P

*Ford T.W., Harris J. & Taylor J.S.* The effects of naloxone on spinal neurones with an excitatory input from the sural nerve in the decerebrated and spinalized rabbit. 61P

*Carlile Simon, Bascom Daphne A. & Paterson David J.* The effect of mild hypoxia on the latency of the human auditory brain stem response. 62P

*Baxter G.D., Allen J.M. & Bell A.J.* The effect of low-energy-density laser irradiation upon human median nerve conduction latencies. 63P

*Blackshaw L.A. & Grundy D.* 5-Hydroxytryptamine (5-HT3) receptor-mediated effects on vagal mucosal afferent fibres from the upper gastrointestinal tract of the anaesthetized ferret. 64P

*Baumann K.I. & Tsu S.Y.H.* Neomycin reversibly impairs the discharge pattern of SA I mechanoreceptors in a rat skin–nerve *in vitro* preparation. 65P

*Terenzi Mariana G., Rees H. & Roberts M.H.T.* The inhibitory effects of anterior pretectal nucleus (APtN) stimulation are partly mediated via a relay in the pontine parabrachial region in anaesthetized and unanaesthetized rats. 66P

*Willer J.C., Bolgert F. & Le Bars D.* Ascending and descending pathways involved in diffuse noxious inhibitory controls (DNIC) in man. 67P

*Villanueva L., Bing Z. & Le Bars D.* Interaction between noxious inputs during recording of subnucleus reticularis dorsalis (SRD) neurones in the anaesthetized rat. 68P

*Millar J., O'Brien F.E., Williams G.V. & Wood J.* Clonidine is an excitatory neuromodulator of anaesthetized rat substantia gelatinosa neurones. 69P

*Siarey R.J., Long S.K. & Evans R.H.* Effect of clonidine on synaptic activity of rat *in vitro* spinal cord preparations. 70P

*Hartell Nick A. & Headley P. Max* Facilitation of spinal reflexes by naloxone. Comparison of responses to electrical and mechanical stimuli in the anaesthetized, spinalized rat. 71P

*Dong Xiao-wei, Parsons Chris G. & Headley P. Max* On the selectivity of intravenous $\mu$- and $\kappa$-opioids on nociceptive and non-nociceptive responses of dorsal horn neurones in the anaesthetized rat. 72P

*Urban L., Patel I.A. & Dray A.* Synaptic activation of deep dorsal horn neurones in the mouse spinal cord *in vitro* by C-fibre stimulation. 73P

*Hinckel P., Dick H.B.H. & Hiemke C.* Interactions between gonadal steroids and thermoresponsive raphe neurones in anaesthetized rats. 74P

*Malkinson T.J., Federico P., Pittman Q.J., Veale W.L. & Cooper K.E.* The urethane-anaesthetized rat as a preparation for the study of fever. 75*P*

*Ball D., Greenhaff P.L. & Maughan R.J.* Dietary manipulation, sodium bicarbonate ingestion and the metabolic response to high-intensity exercise in man. 76*P*

*Mannion A.F., Jakeman P.M. & Willan P.L.T.* The effects of training upon skeletal muscle buffering and high-intensity exercise performance in man. 77*P*

*Lambert C.P., Greenhaff P.L., Ball D. & Maughan R.J.* Ammonia accumulation and endurance capacity during intense intermittent exercise following sodium bicarbonate ingestion in man. 78*P*

*Sewell D.A., Harris R.C., Marlin D.J. & Dunnett M.* Muscle fibre characteristics and carnosine content of race-trained thoroughbred horses. 79

*Rouse M.E. & Baxendale R.H.* A comparison of the frequency content of muscle sounds and electromyogram during voluntary isometric contractions in man. 80*P*

*Stokes M.J.* Acoustic myography reflects force oscillation during stimulated contractions of the human adductor pollicis muscle. 81*P*

*Harridge S.D.R. & White M.J.* The relationship between the time to peak tension of the isometric twitch and electrically evoked isokinetic torque in young and elderly human triceps surae. 82*P*

*Barker D., Scott J.J.A. & Stacey M.J.* Mixed fibre types in cat $\beta$ motor units. 83*P*

*Hughes S., Bailey C.J. & Smith M.E.* $\beta$-Endorphin immunoreactivity and $\beta$-endorphin receptors in the neuromuscular system of the obese-diabetic ob/ob mouse *in vitro*. 84*P*

*Hughes S. & Smith M.E.* Corticotrophin receptors in murine skeletal muscles *in vitro*. 85*P*

*Howie A.J. & Lote C.J.* Immunohistological study of Tamm–Horsfall protein in kidney and skin of the frog *Rana temporaria*. 86*P*

*Chamienia A.L. & Johns E.J.* The influence of angiotensin II on the renal actions of atrial natriuretic peptides in the anaesthetized rat. 87*P*

*Walter S.J., Skinner J. & Shirley D.G.* Renal papillary interstitial fluid composition in anaesthetized rats following unilateral nephrectomy. 88*P*

*Greenwood S.L., Boyd R.D.H. & Sibley C.P.* Oxygen consumption by isolated human placental villi in the first and third trimester. 89*P*

*Gehl K.A., Harvey B.J. & Ellory J.C.* Sulphate uptake by isolated bovine chondrocytes. 90*P*

*Stelling J.W. & Jacob T.J.C.* Anomalous rectification, present in freshly isolated pigmented ciliary epithelial cells from bovine eyes, disappears in culture. 91*P*

*Gooch A.J. & Jacob T.J.C.* Whole-cell currents in non-pigmented, isolated bovine ciliary epithelial cells. 92*P*

*Ouadid Halima, Séguin J., Frapier J.M., Dumuis Aline, Bockaert J. & Nargeot J.* 5-Hydroxytryptamine increases Ca current in single human atrial cells via a 5-$HT_4$ receptor positively coupled to adenylate cyclase. 93*P*

*Bryant S.M., Ryder Kathryn O. & Hart G.* Effects of neuropeptide Y on cell length and membrane currents in isolated guinea-pig ventricular myocytes. 94*P*

*Zang W.-J., Honjo H., Kirby M.S. & Boyett M.R.* Ultra-slow voltage-dependent inactivation and rate-dependent changes of the $Ca^{2+}$ current in ventricular myocytes isolated from guinea-pig and ferret hearts. 95*P*

*Kozlowski R.Z., Twist V.W., Brown A.M. & Powell T.* Rapid release of intracellular GTP, by flash photolysis, activates L-type $Ca^{2+}$ currents in guinea-pig ventricular myocytes. 96*P*

*Lee Chin O. & Levi Allan J.* The effect of stimulation on intracellular sodium measured with SBFI in voltage-clamped ventricular myocytes isolated from rabbit hearts. 97*P*

*Than N. & Orchard C.H.* The effect of acidosis and hypoxia on the response of cardiac muscle isolated from ferret hearts to noradrenaline. 98*P*

*Brooksby Paul, Levi Allan & Vann Jones John* Contractile properties of isolated ventricular myocytes from spontaneously hypertensive rat (SHR) hearts. 99*P*

*Shelton R.M. & El-Haj A.J.* Responses of rat periosteal and mouse MC3T3-E1 cells to PTH and $PGE_2$ using a microcarrier bead column. 100*P*

*Thomas N., Berovic N. & Thornhill R.A.* Intensity of light diffracted by well-ordered isolated muscle fibres from rabbit psoas. 101*P*

*Turay L., Gerlach G.-F. & Goldspink G.* Changes in myosin h.c. gene expression in the common carp during acclimation to warm environmental temperatures. 102*P*

*Publicover S.J.* Long-lasting potentiation of synaptic transmission in area CA1 of rat hippocampal slices induced by exposure to the G-protein activator $AlF_4^-$. 103*P*

*Coles J.A., Eilbeck J.C., Scott A.C. & Zeumer C.* Graded amplification of small signals in honeybee drone photoreceptors described by the Hodgkin–Huxley equations. 104*P*

*Bannister N.J.* Innervation of luminous glands in the copepod *Euaugaptilus magnus*. 105*P*

*de Souza S.C.R. & Taylor E.W.* Electrolytes and acid–base regulation in *Carcinus maenas* during prolonged aerial exposure. 106*P*

*Ivanov K.P.* Thermoregulatory chemical metabolism and muscle work efficiency. 107*P*

## POSTER COMMUNICATIONS

*Davies Eleanor, Westphal Silke, Gillespie J.I. & Dunlop W.* Isolation and characterization of single vascular smooth muscle cells derived from human uterine arteries. 108*P*

*Levick J.R.* A two-dimensional unit-cell model of trans-synovial fluid movement in the rabbit knee. 109*P*

*Newton J.P. & Cadden S.W.* The effect of attentional factors on an inhibitory jaw reflex in man. 110*P*

*Courtice C.J., Davies J. & Hutton G.H.* A pneumatic device producing consistent spinal injury in anaesthetized rats. 111*P*

*Morris R., Taylor H.S. & Cuthbertson K.S.R.* Distribution of somatostatin, calcitonin gene-related peptide and α-D-galactose selective lectin binding in organotypic cultures of rat fetal spinal cord with attached dorsal root ganglia. 112*P*

*Bruce W.G., Leslie G.C., Parkinson J., Part N.J. & Swanson A.J.G.* Involuntary, contralateral leg movements during Wartenberg pendulum testing of school children with cerebral palsy. 113*P*

*Cole J.D., Philip H.I. & Sedgwick E.M.* Magnetic brain stimulation produces a normal silent period in the EMG but does not lead to perception of an induced finger movement in a chronically deafferented man. 114*P*

*Stirk G.C.* Effect of altered neuronal activity on NMDA receptor involvement in the activity of nociceptive dorsal horn neurones in anaesthetized rats. 115*P*

*Thornhill R.A., Thomas N. & Berovic N.* Curvature of the striation pattern affects optical diffraction by rabbit psoas muscle fibres. 116*P*

*Moroz L.L. & Winlow W.* An identified, multifunctional, giant neurone of the left parietal ganglion is involved in control of defensive behaviour in *Lymnaea*. 117*P*

*Thompson C.R., Brown J.S., Gee H. & Taylor E.W.* Investigation of respiratory sinus arrhythmia in the human fetus and neonate. 118*P*